AMENDMENTS TO THE CLAIMS

1-2. (Canceled)

3. (Currently amended) The device of claim ~~1~~ 6, further comprising a radiotelemetry device for transmitting data, wherein the radiotelemetry device is situated within the housing.

4. (Currently amended) The device of claim 6, ~~A device for measuring an analyte in a biological fluid, the device comprising:~~

~~a sensor, the sensor comprising an apparatus for determining an amount of an analyte in a biological sample~~, wherein the ~~apparatus~~ member comprises a sensor interface dome, wherein the sensor interface dome comprises a membrane assembly, wherein the membrane assembly comprises ~~an~~ the angiogenic layer ~~for promoting adequate microcirculatory delivery of the analyte and oxygen to the sensor~~.

5. (Canceled)

6. (Original) A wholly implantable glucose monitoring device, the device comprising:

a) a housing and a sensor, wherein the sensor is situated on the housing, wherein the sensor comprises a member for determining an amount of glucose in a biological fluid of a tissue of a host, and wherein the tissue of the host is adjacent to a first side of the housing;

b) an angiogenic layer situated on said sensor, wherein the angiogenic layer promotes adequate microcirculatory delivery of analyte and oxygen to the sensor; and

c) a securing member for securing the device to the tissue of the host, wherein the securing member is situated on the first side of the housing.

7. (Original) The device of claim 6, wherein the securing member comprises a material selected from the group consisting of polyester, polypropylene cloth, polytetrafluoroethylene felts and expanded polytetrafluoroethylene.

8. (Original) The device of claim 6, wherein the angiogenic layer is selected from the group consisting of expanded polytetrafluoroethylene, polyester, hydrophilic polyvinylidene fluoride, mixed cellulose esters, polyvinyl chloride, polypropylene, polysulfone, and polymethacrylate.

9. (Original) The device of claim 6, wherein the glucose determining member comprises an electrochemical cell.

10. (Original) The device of claim 6, wherein the glucose determining member measures surface plasmon resonance.

11. (Original) The device of claim 6, wherein the glucose determining member measures surface acoustic waves.

12. (Original) The device of claim 6, wherein the glucose determining member measures optical absorbance in the long wave infrared region.

13. (Original) The device of claim 6, wherein the glucose determining member measures optical rotation of polarized light.

14. (Original) The device of claim 6, wherein the housing comprises a second side situated opposite to the first side, wherein the second side is substantially smooth.

15. (Original) The device of claim 6, wherein the securing member is situated substantially only on the first side of the housing.

16. (Original) The device of claim 6, wherein the securing member is situated on more than one side of said housing.

17. (Original) A device for measuring glucose in a tissue of a host, the device comprising:

a wholly implantable device comprising a sensor having an interface for communicating with a tissue of the host, the interface comprising an angiogenic layer for promoting adequate microcirculatory delivery of glucose and oxygen to the sensor, and an outermost stability layer for promoting formation of a stable foreign body capsule structure.

18. (Original) The device of claim 17, wherein the angiogenic layer is selected from the group consisting of expanded polytetrafluoroethylene, polyester, hydrophilic polyvinylidene fluoride, mixed cellulose esters, polyvinyl chloride, polypropylene, polysulfone, and polymethacrylate.

19. (Original) The device of claim 17, wherein the outermost stability layer comprises a polyester.

20-39. (Canceled)

40. (Currently amended) The analyte-measuring device of claim ~~39~~ 45, further comprising an electrolyte layer, wherein the electrolyte layer maintains hydrophilicity on a surface of the sensor.

41. (Currently amended) The analyte-measuring device of claim ~~39~~ 45, further comprising an interference layer, wherein the interference layer restricts passage of a species that interferes with a measurement of the analyte.

42. (Currently amended) The analyte-measuring device of claim ~~39~~ 45, further comprising an enzyme layer, wherein the enzyme layer comprises a component for catalyzing an enzyme reaction.

43. (Currently amended) The analyte-measuring device of claim ~~39~~ 45, further comprising a resistance layer, wherein the resistance layer controls a flux of oxygen and the analyte through the membrane assembly.

44. (Currently amended) The analyte-measuring device of claim ~~39~~ 45, further comprising a bioprotective layer, wherein the bioprotective layer blocks passage of macrophages.

45. (Currently amended) ~~The analyte-measuring device of claim 39, further comprising~~ An analyte-measuring device suitable for implantation in a host, the device comprising:

a housing, wherein the housing comprises a securing member for preventing movement of the device after implantation;

a sensor for determining an amount of an analyte in the host; and

an angiogenic layer, wherein the angiogenic layer promotes development of blood vessels microcirculation.

46. (Currently amended) ~~The analyte-measuring device of claim 39, further comprising~~ An analyte-measuring device suitable for implantation in a host, the device comprising:

a housing, wherein the housing comprises a securing member for preventing movement of the device after implantation;

a sensor for determining an amount of an analyte in the host; and

a stability layer, wherein the stability layer promotes formation of a stable foreign body capsule structure.

47. (New) The device of claim 6, wherein the sensor is convex with reference to the housing.

48. (New) The device of claim 6, wherein the sensor comprises a membrane assembly.

49. (New) The device of claim 48, wherein the membrane assembly comprises an enzyme membrane adapted to: 1) control a flux of oxygen and the analyte, 2) enyzmatically react with the analyte, and 3) restrict passage of a species that interferes with a measurement of the analyte.

50. (New) The device of claim 49, wherein the enzyme membrane is selected from the group consisting of polyethylene, polyvinylchloride, tetrafluoroethylene, polytetrafluoroethylene, polypropylene, polyacrylamide, polymethyl methacrylate, silicone polymer, polycarbonate, collagen, polyurethane, polyurethane block copolymers, cellulose acetate, and cellulosic polymer.

51. (New) The device of claim 49, wherein the enzyme membrane comprises a resistance layer, wherein the resistance layer restricts transport of glucose through the enzyme membrane.

52. (New) The device of claim 51, wherein the resistance layer comprises a polymer membrane with an oxygen-to-glucose permeability ratio of approximately 200:1.

53. (New) The device of claim 49, wherein the enzyme membrane comprises a comprises glucose oxidase.

54. (New) The device of claim 49, wherein the enzyme membrane comprises an interference layer, wherein the interference layer comprises a hydrophobic membrane substantially permeable to hydrogen peroxide.

55. (New) The device of claim 54, wherein the interference layer comprises a hydrophobic membrane substantially impermeable to a chemical composition comprising a molecular weight substantially greater than a molecular weight of hydrogen peroxide.

56. (New) The device of claim 49, wherein the enzyme membrane comprises an electrolyte layer, wherein the electrolyte layer comprises a semipermeable hydrophilic coating.

57. (New) The device of claim 56, wherein the electrolyte layer comprises a curable copolymer, wherein the curable copolymer comprising comprises a urethane polymer and a hydrophilic film-forming polymer.

58. (New) The device of claim 17, wherein the apparatus comprises a housing, and wherein the sensor is convex with reference to the housing.

59. (New) The device of claim 17, wherein the sensor comprises a membrane assembly.

60. (New) The device of claim 59, wherein the membrane assembly is selected from the group consisting of polyethylene, polyvinylchloride, tetrafluoroethylene, polytetrafluoroethylene, polypropylene, polyacrylamide, polymethyl methacrylate, silicone polymer, polycarbonate, collagen, polyurethane, polyurethane block copolymers, cellulose acetate, and cellulosic polymer.

61. (New) The device of claim 17, further comprising a radiotelemetry device for transmitting data, wherein the radiotelemetry device is situated within the housing.

62. (New) The device of claim 17, wherein the apparatus comprises a sensor interface dome.

63. (New) The device of claim 59, wherein the membrane assembly comprises an enzyme membrane adapted to: 1) control a flux of oxygen and the analyte, 2) enyzmatically react with the analyte, and 3) restrict passage of a species that interferes with a measurement of the analyte.

64. (New) The device of claim 63, wherein the enzyme membrane comprises a resistance layer, wherein the resistance layer restricts transport of glucose through the enzyme membrane.

65. (New) The device of claim 64, wherein the resistance layer comprises a polymer membrane with an oxygen-to-glucose permeability ratio of approximately 200:1.

66. (New) The device of claim 63, wherein the enzyme membrane comprises an enzyme layer, wherein the enzyme layer comprises glucose oxidase.

67. (New) The device of claim 63, wherein the enzyme membrane comprises an interference layer, wherein the interference layer comprises a hydrophobic membrane substantially permeable to hydrogen peroxide.

68. (New) The device of claim 67, wherein the interference layer comprises a hydrophobic membrane substantially impermeable to a chemical composition comprising a molecular weight substantially greater than a molecular weight of hydrogen peroxide.

69. (New) The device of claim 63, wherein the enzyme membrane comprises an electrolyte layer, wherein the electrolyte layer comprises a semipermeable hydrophilic coating.

70. (New) The device of claim 69, wherein the electrolyte layer comprises a curable copolymer, wherein the curable copolymer comprises a urethane polymer and a hydrophilic film-forming polymer.

71. (New) The device of claim 45, wherein the sensor is convex with reference to the housing.

72. (New) The device of claim 45, wherein the sensor comprises a membrane assembly.

73. (New) The device of claim 72, wherein the membrane assembly is selected from the group consisting of polyethylene, polyvinylchloride, tetrafluoroethylene, polytetrafluoroethylene, polypropylene, polyacrylamide, polymethyl methacrylate, silicone polymer, polycarbonate, collagen, polyurethane, polyurethane block copolymers, cellulose acetate, and cellulosic polymer.

74. (New) The device of claim 45, further comprising a radiotelemetry device for transmitting data, wherein the radiotelemetry device is situated within the housing.

75. (New) The device of claim 45, wherein the device comprises a sensor interface dome.

76. (New) The device of claim 72, wherein the membrane assembly comprises an enzyme membrane adapted to: 1) control a flux of oxygen and the analyte, 2) enyzmatically react with the analyte, and 3) restrict passage of a species that interferes with a measurement of the analyte.

77. (New) The device of claim 76, wherein the enzyme membrane comprises a resistance layer, wherein the resistance layer restricts transport of glucose through the enzyme membrane.

78. (New) The device of claim 77, wherein the resistance layer comprises a polymer membrane with an oxygen-to-glucose permeability ratio of approximately 200:1.

79. (New) The device of claim 76, wherein the enzyme membrane comprises an enzyme layer, wherein the enzyme layer comprises glucose oxidase.

80. (New) The device of claim 76, wherein the enzyme membrane comprises an interference layer, wherein the interference layer comprises a hydrophobic membrane substantially permeable to hydrogen peroxide.

81. (New) The device of claim 80, wherein the interference layer comprises a hydrophobic membrane substantially impermeable to a chemical composition comprising a molecular weight substantially greater than a molecular weight of hydrogen peroxide.

82. (New) The device of claim 76, wherein the enzyme membrane comprises an electrolyte layer, wherein the electrolyte layer comprises a semipermeable hydrophilic coating.

83. (New) The device of claim 82, wherein the electrolyte layer comprises a curable copolymer, wherein the curable copolymer comprises a urethane polymer and a hydrophilic film-forming polymer.

84. (New) The device of claim 46, wherein the sensor is convex with reference to the housing.

85. (New) The device of claim 46, wherein the sensor comprises a membrane assembly.

86. (New) The device of claim 85, wherein the membrane assembly is selected from the group consisting of polyethylene, polyvinylchloride, tetrafluoroethylene, polytetrafluoroethylene, polypropylene, polyacrylamide, polymethyl methacrylate, silicone polymer, polycarbonate, collagen, polyurethane, polyurethane block copolymers, cellulose acetate, and cellulosic polymer.

87. (New) The device of claim 46, further comprising a radiotelemetry device for transmitting data, wherein the radiotelemetry device is situated within the housing.

88. (New) The device of claim 46, wherein the device comprises a sensor interface dome.

89. (New) The device of claim 85, wherein the membrane assembly comprises an enzyme membrane adapted to: 1) control a flux of oxygen and the analyte, 2) enyzmatically react with the analyte, and 3) restrict passage of a species that interferes with a measurement of the analyte.

90. (New) The device of claim 89, wherein the enzyme membrane comprises a resistance layer, wherein the resistance layer restricts transport of glucose through the enzyme membrane.

91. (New) The device of claim 90, wherein the resistance layer comprises a polymer membrane with an oxygen-to-glucose permeability ratio of approximately 200:1.

92. (New) The device of claim 89, wherein the enzyme membrane comprises an enzyme layer, wherein the enzyme layer comprises glucose oxidase.

93. (New) The device of claim 89, wherein the enzyme membrane comprises an interference layer, wherein the interference layer comprises a hydrophobic membrane substantially permeable to hydrogen peroxide.

94. (New) The device of claim 93, wherein the interference layer comprises a hydrophobic membrane substantially impermeable to a chemical composition comprising a molecular weight substantially greater than a molecular weight of hydrogen peroxide.

95. (New) The device of claim 89, wherein the enzyme membrane comprises an electrolyte layer, wherein the electrolyte layer comprises a semipermeable hydrophilic coating.

96. (New) The device of claim 95, wherein the electrolyte layer comprises a curable copolymer, wherein the curable copolymer comprises a urethane polymer and a hydrophilic film-forming polymer.